

REMARKS

Claims 14-22, 35, 37-45 and 47-49 are pending in this application. By this Amendment, claims 36 and 46 are cancelled without prejudice or disclaimer of the subject matter therein and claim 22 is amended for proper antecedent basis, and claims 35 and 45 are amended, merely to incorporate dependent claims 36 and 46, respectfully as discussed on August 22, 2003 in a telephone discussion. Figures 11A, 12A, 13A and 14A have also been added as indication had been made that the barriers in two directions had not been provided in the Figures. Support for the added Figures was provided for in the original specification on page 14, last paragraph to page 17, second full paragraph. Reconsideration in view of the above amendments and following remarks is respectfully requested.

Entry of the amended claims is proper under 37 C.F.R. §1.116 since the amendments: (1) place the application in condition for allowance (for the reasons discussed herein); and (2) do not raise any new issues requiring further search and/or consideration (since the amendments merely correct antecedent basis problems (claim 22) and incorporate previously dependent claims (claim 36 into claim 35 and claim 46 into claim 45)). Entry is thus requested.

Applicants gratefully acknowledge the courtesies extended by the Examiner on July 23, 2003 and August 22, 2003 in two telephone discussions. As discussed in the telephone discussions, Amemiya et al (U.S. Patent No. 5,742,122) (hereinafter referred to as Amemiya 1) would have the barriers as illustrated in parallel to the address electrodes, but in order to meet

the limitations of the claimed invention, would also require secondary barriers perpendicular to these barriers, as mentioned in the text of the patent.

Applicants submit that the secondary barriers would have to be located between pairs of bus electrodes (Sa) in Figure 2 of Amemiya 1, with the secondary barriers and the grooves located in parallel to the bus electrodes. Therefore, the grooves parallel to the bus electrodes would not only be over the barriers, but would also be between the barriers. Therefore, pertaining to claim 14, Amemiya 1 would not disclose or suggest each groove centrally located between adjacent barriers (as illustrated in Figure 12 of the present application).

Further, pertaining to claim 35, Amemiya 1 would again have additional grooves which are not each located to correspond with top portions of barriers (as illustrated in Figure 13 of the present application).

Finally, pertaining to claim 45, Amemiya 1 would again have additional grooves which are not each located between a pair of electrodes in each first electrode pair, wherein each groove is centrally located between barriers (as illustrated in Figure 12 of the present application).

I. 35 U.S.C. §102(b)

The Office Action rejects claims 35-40, 42, and 47-49 under 35 U.S.C. §102(b) over Amemiya et al. (U.S. Patent No. 5,742,122) (hereinafter referred to as Amemiya 1). Claim 36 has been cancelled, therefore the rejection of claim 36 is moot. Since Amemiya 1 fails to disclose or suggest all the features of the remaining claims, the rejection is respectfully traversed.

Applicants respectfully submits that Amemiya 1 discloses, as illustrated in Fig. 2, a plasma display panel which includes a front side plate 1 with transparent electrodes S, metallic bus electrodes SA and a dielectric layer 23 formed thereon. Further, Amemiya 1 also discloses a back side plate 2, which includes barrier ribs 31. Amemiya 1 also discloses in col. 7, line 65 to col. 8, line 3 that the barrier ribs 31 may be formed as cross stripes or latticework of matrix instead of the stripe arrangement of ribs as shown in Fig. 2.

However, Amemiya 1 fails to disclose or suggest, as recited in claim 35, at least the feature of a plurality of grooves each of which are located to correspond with top portions of barriers. Rather, Amemiya 1 discloses a dielectric layer which includes a pair of first thickness portions formed on far ends of electrodes from a discharge gap respectively, which are larger than a second thickness portion on facing near ends of the facing electrodes. See Amemiya 1 Abstract.

Further, the dielectric layer is provided with a depth from its surface to a substrate larger than that on the second thickness portion between adjacent electrodes. See Amemiya 1 Abstract. However, as illustrated in Fig. 2, Amemiya 1 discloses multiple second thickness portions between bus electrodes SA, which would not correspond to tops of barriers even if the barriers were cross stripes or a latticework of matrix. Applicants note that Fig. 3 of Amemiya 1 clearly discloses a discharge below the second thickness area of the dielectric layer on a side portion of Fig. 2, which clearly cannot include a barrier therein. Should a barrier be provided in the area G of Fig. 3, the discharge could not occur and thus the plasma display panel would be

inoperative. Therefore, Amemiya 1 clearly does not disclose a plurality of grooves each located to correspond with top portions of barriers, as recited in claim 35.

Further, with respect to claim 47, similarly, Amemiya 1 fails to disclose or suggest a plurality of grooves, wherein each groove is located above a barrier. For the reasons discussed above, Applicants submit that Amemiya 1 includes grooves not located above a barrier.

For at least the reasons set forth above, Applicants respectfully submit that claims 35 and 47 are allowable. The rejection of claim 36 is moot as claim 36 has been cancelled without prejudice or disclaimer of the subject matter therein. Claims 37-40 and 42 depend from claim 35 and claims 48 and 49 depend from claim 47, and are allowable for at least the same reasons, as well as their added features and the combinations thereof.

II. 35 U.S.C. § 102(e)

The Office Action rejects claims 45 and 46 under 35 U.S.C. § 102(e) over Amemiya (U.S. Patent No. 6,525,470) (hereinafter Amemiya 2). Since claim 46 is cancelled without prejudice or disclaimer of the subject matter therein the rejection is moot. Therefore, as Amemiya 2 fails to disclose or suggest all of the features of the remaining claim, the rejection is respectfully traversed.

Applicants respectfully submitted that Amemiya 2 discloses, as illustrated in Figs. 1, 2 and 3, a plasma display panel which includes a pair of opposed row electrodes disposed adjacently to a display side substrate interposed by a discharged gap, and a dielectric layer covering the row

electrodes. See Amemiya 2 Abstract. The dielectric layer is formed except in the discharge space, thereby forming a vacant space or groove in the discharge gap. See Amemiya 2 Abstract. However, Amemiya 2 fails to disclose or suggest, as recited in claim 45, at least the features of barriers formed on a second substrate, and a first substrate dielectric layer having a plurality of grooves, wherein each groove is located between the pair of electrodes in each first substrate electrode pair, and wherein each groove is centrally located between barriers.

Rather, Amemiya 2 discloses, as illustrated in Fig. 1, partitions 19 located perpendicular to the discharge gap G thereby rendering the gap to be perpendicular to the partitions 19 and not centrally located between barriers. Each gap is continuous over each partition 19 and therefore cannot be centrally located between barriers.

The Office Action dated May 23, 2003 states that "each groove is centrally located between barriers 19 (See Fig. 1)." See page 4, lines 2 and 3 of the Office Action. However, as illustrated in Fig. 3, each groove is clearly not centrally located between the partitions 19.

For at least the reasons set forth above, Applicants respectfully submits that claim 45 is allowable. Claim 46 has been cancelled without prejudice or disclaimer of the subject matter therein, therefore the rejection is moot. Withdrawal of the rejection is respectfully requested

III. 35 U.S.C. § 103(a)

A. Claim 41

The Office Action rejects claim 41 under 35 U.S.C. § 103(a) over Amemiya 1. Since Amemiya 1 fails to disclose or suggest all of the features of the claim, the rejection is respectfully traversed.

As claim 41 depends from claim 35, Applicants respectfully submit that claim 41 is allowable for at least the same reasons as claim 35, mentioned above, as well as its added features and the combination thereof. Withdrawal of the rejection is respectfully requested.

B. Claims 14-22 and 43-44

The Office Action rejects claims 14-22 and 43-44 under 35 U.S.C. § 103(a) over Amemiya 1 in view of Amemiya 2. Since the references, alone or in combination, fail to disclose or suggest all the features of the claims, the rejection is respectfully traversed.

With respect to claim 14, Applicants respectfully submit that Amemiya 1 and Amemiya 2 fail to disclose or suggest at least the features of barriers formed on a first dielectric layer in first and second directions and a second dielectric layer formed on the first substrate, wherein the second dielectric layer includes a plurality of grooves with a predetermined width and depth in the first and second directions on a surface region of the second dielectric layer, and wherein each groove is centrally located between two adjacent barriers.

Rather, as illustrated in Fig. 2 of Amemiya 1, multiple second thickness portions of the dielectric layer 23, which are smaller than first thickness portions, are located above barriers 31,

and first thickness portions 24a are located between adjacent barriers. Furthermore, on a side portion of Fig. 2, second thickness portions are located both between metallic bus electrode SA pairs and between individual metallic bus electrodes SA of single pairs. See Fig. 2 of Amemiya 1. Therefore, each second thickness portion is not located between two adjacent barriers.

Amemiya 2 fails to cure these deficiencies. As mentioned above, Amemiya 2 does not disclose or suggest grooves centrally located between barriers.

For at least the reasons set forth above, Applicants respectfully submit that claim 14 is allowable. Claims 15-22 and 44 depend from claim 14 and are allowable for at least the same reasons, as well as their added features and the combinations thereof. Claim 43 depends from claim 35, which for the reasons discussed above, is also not disclosed or suggested by the cited references, alone or in combination. Withdrawal of the rejection is respectfully requested.

CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and prompt allowance are earnestly solicited.

If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney, **Laura L. Lee**, at the telephone number listed below.

Serial No. 09/721,709

Docket No. K-238A

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
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Attachments:

Request for Approval of Additional Drawings
(attaching new Figs. 11A, 12A, 13A and 14A)